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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,706	02/11/2002	Mihai Adrian Tiberiu Sanduleanu	NL010554	4398

24737 7590 04/23/2003

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EXAMINER

CUNNINGHAM, TERRY D

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/073,706

Applicant(s)

SANDULEANU, MIHAI ADRIAN
TIBERIU

Examiner

Terry D. Cunningham

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/073,706 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The specification is objected to as not including the corresponding headings for each of the sections therein. Appropriate correction is required.

Drawings

Figures 1-3 should be designated by a legend such as "Prior Art" in order to clarify what is applicant's invention (see M.P.E.P. § 608.02(g)). Note, Applicant may no longer request that any objection to the drawing(s) be held in abeyance. See 37 C.F.R. § 1.85(a).

Claim Objections

Claims 4-6 and 11 are objected to for the informalities listed below.

In claim 4, "second" and "third" "transimpedance converters" imply the existence of an already "first" recited such "transimpedance converter, not found in the preset chain of dependency.

In claim 5, to be consistent with claim 3, "(12; 14; 15)" should be changed to --(12)--.

In claim 6, "second" and "third" "transimpedance converters" imply the existence of an already "first" recited such "transimpedance converter, not found in the preset chain of dependency.

Claim 11 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It is not understood how a "Data and clock recovery unit" can further limit a "phase shifter".

Appropriate corrections for the above discussed objections are required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 8 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification fails to properly enable the circuits shown in Figs. 5 and 6. It is not understood from the specification how the circuits of Figs. 5 and 6 relate or cooperate with the claimed embodiment of Fig. 4. Examiner acknowledges that element 10 of Fig. 4 is stated as being a type of "all-pass circuit" as are the circuits of Figs. 5 and 6. However, it is not understood or seen possible as to how the circuits of Figs. 5 and 6 could be used for "all-pass circuit" 10 of Fig. 4. The specification expressly states the purpose of element 10 as being for "producing two quadrature signals with equal amplitudes". It is not seen that the circuits of Figs. 5 and 6 would provide this operation. While Fig. 5 is disclosed as receiving an input I_i , it does not appear the such would provide two current quadrature signals of the same value. With respect to Fig. 6, such is seen to receive differential input voltages (not currents) and does not appear to provide two current quadrature signals of the same value. Thus, it does not appear that the circuit of Figs. 5 and 6 can operate as respective embodiments for element 10 of Fig. 4.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-4 and 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2-4, 7 and 8, it is not understood how the circuit can be "characterized by" elements. Conventionally, the use of the phrase "characterized by" is generally used to for recitation of function or of further details of elements already recited. If this phrase is intended to be used for reciting additional elements, it should be changed to --characterized by further including--.

In claim 6, there is no antecedent for "said second and third transimpedance converters". To overcome this and the above discussed objection, it is suggest that "said second and third" be changed to --first and second--.

In claims 7 and 8, there is no support found in the specification for the elements recited therein in addition to the structure recited in claim 1. Although such is unclear, as discussed above, it appears that the structure in claims 7 and 8 are intended to further limit the "splitting means" 10 of Fig. 4. Additionally, claims 7 and 8 fail to recite any connection or cooperation between the elements therein and the structure of claim 1.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v.*

Art Unit: 2816

Eagle Mfg. Co., 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-11 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-11 of co-pending Application No. 10/217,825. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 11 rejected under 35 U.S.C. 102(b) as being anticipated by Ishihara (USPN 6,054,883- cited by Applicant). Ishihara discloses, in Fig. 2, a circuit comprising: “an input means (15)”; “splitting means (PS1)”; “adding means (AD5)”; “a subtracting means (SU4)”; “a first output (17)”; “a second output (16)” “a first transimpedance converter (AM2 and AM3)” “a second transimpedance converter (EQ7)”; and “a third transimpedance converter (EQ6), all connected and operating similarly as recited by Applicant.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2816

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara (USPN 6,054,883) in view of Liu (USPN 6,496,545). In the above discussed circuit to Ishihara, there is no express disclosure for the details of "phase shifter" 15. Liu discloses, in Fig 5A, an improved phase shifter having increased sideband rejection. This circuit is seen to have "a first transistor (Q3)", "a second transistor (Q1 or Q2)" and "a capacitor (C1)". Thus, it would have been obvious for one skilled in the art to used the specific phase shifter in Fig. 5A of Liu for the broad phase shifter 15 of Ishihara for the expected advantage of increased sideband rejection.

Due to the present indefiniteness and lack of enablement in claim 8, allowable subject matter cannot be determined.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry Cunningham whose telephone number is 703-308-4872. The examiner can normally be reached on Monday-Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone numbers for Technology Center 2800 are 703-872-9318 for Before Final communications and 703-872-9319 for After Final communications. Please note, any faxed paper clearly stating **DRAFT** or **PROPOSED AMENDMENT** at the top will be forwarded directly to the Examiner. All others will be treated as a formal response and acted upon accordingly.


Application/Control Number: 10/073,706

Page 7

Art Unit: 2816

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.

TC
April 21, 2003


Terry D. Cunningham
Primary Examiner
Art Unit 2816